RENEWABLE
HOT WATER

Solahart®

HEAT PUMP

SOLAHART ATMOS® Eco 180HDC

A Solahart Atmos® Eco 180HDC Heat Pump is the smart choice for people looking for an energy-efficient alternative to a small to medium-sized electric water heater but who are unable to install a solar water heater. It heats water by drawing heat from the surrounding air, a reliable and efficient way to reduce energy consumption and cut greenhouse gas emissions, and a sustainable way to reduce your water heating energy consumption without the need for rooftop solar collectors. Heat from the air is absorbed by an evaporator and transferred to the water through an advanced wrap-around microchannel heat exchange technology for uniform and faster water heating. This process continues while heating is required until the water in the tank reaches the hot water temperature set-point.

How you benefit:

LOW GWP
(Global Warming Potential)

Uses R513a refrigerant with a GWP of <700 which is better for the environment.

COLD-CLIMATE FRIENDLY

Suitable for cold climates with an operating range from -7°C to +43°C.[1]

CUT YOUR ENERGY USAGE

Could save up to 70% on your water heating energy consumption compared to an electric water heater in Zone 3.[2]

BUILT AUSSIE TOUGH

Suitable for harsh water conditions and comes with 7-year cylinder warranty.[3,4]

WORKS DAY & NIGHT

A heat pump draws warmth from the surrounding air to heat the water.

TECHNICAL DATA

Solahart®

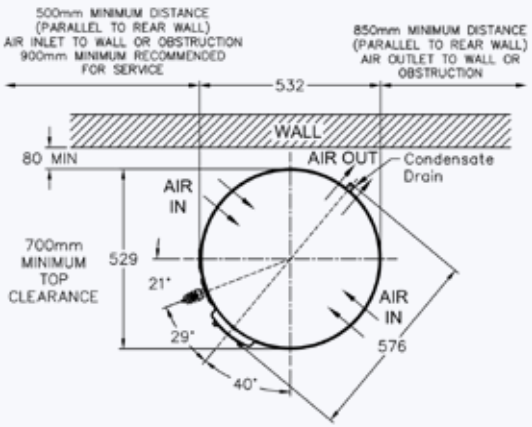
MODEL	180HDC
Product number – with black anode (magnesium)	180HDC24
Product number – with blue anode (aluminium)	180HDC24/B
Storage capacity	178 litres
Boost capacity	168 litres
People per household	1 to 3
Rated Heat Pump power input @ 240 V	683 Watts
Electric element rating@ 240 V	2400 Watts
Max. power input @ 240 V	3500 Watts
Recommended electrical circuit	15 Amps
Power supply	220 - 240 V/50 Hz
Noise level @ 1 metre[5]	48 dB(A)
Average COP @ 19°C ambient air temperature & from 10°C to 60°C water temperature[6]	4.9
Average Heat Pump Heating Capacity @ 19°C Ambient air temperature & from 10°C to 60°C water temperature[6]	3.2 kW
Dimensions and Specifications	
Tank height	1810 mm
Tank width	532 mm
Tank depth	576 mm
System weight – Cartoned	116 kg
System weight – Full	284 kg
Refrigerant	R513a
Refrigerant circuit pressure	2600 kPa
IP rating	IP24
Water Connections and Pressure Settings	
Inlet	Rp 3/4
Outlet	Rp 3/4
Temperature Press Relief (TPR) valve setting	1000 kPa
Expansion Control Valve (ECV) setting	850 kPa
Max. mains supply pressure with Expansion Control Valve	680 kPa
Max. mains supply pressure without Expansion Control Valve	800 kPa

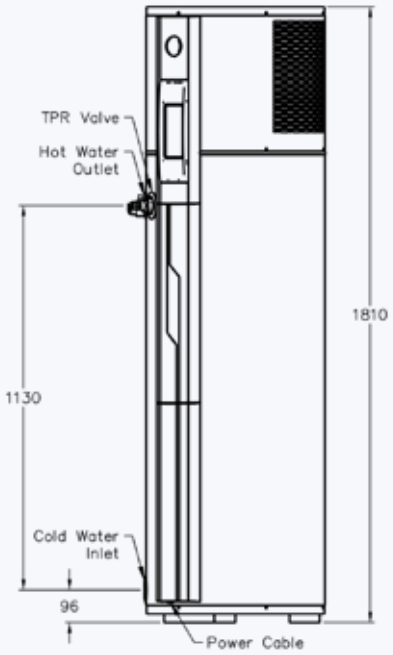
Heat Pump 180HDC Performance Specifications

Ambient Air Temp	Relative Humidity	Average Heat Pump Heating Capacity (kW)	Recovery Rate @ 45°C rise (L / hr)	Average COP
9°C	87%	2.6	51	4.3
19°C	66%	3.2	61	4.9
33°C	39%	3.8	73	5.8
35°C	56%	4.2	81	6.1

Back-Up Heating Unit Recovery Rate @ 240 V

Heating Unit Rating	Recovery Rate @ 30°C rise (L / hr)	Recovery Rate @ 40°C rise (L / hr)	Recovery Rate @ 50°C rise (L / hr)
2400 watts	69	52	41

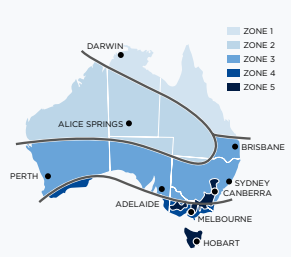




About STCs

Small-scale Technology Certificates (STCs) provide a financial incentive to encourage the installation of Solar and Heat Pump water heaters provided under a Federal Government legislated scheme.

This map shows the climate Zones within Australia which will define the number of STCs allocated to an approved Heat Pump water heater. Your installation may be eligible for STCs and may be eligible for an additional incentive in some states.



For more information on STCs visit **www.solahart.com.au/stc-incentives**

Specifications and designs included in this data sheet are subject to change without notice.

(1) The specified -7˚C to 43˚C temperature range is the operational range of the Heat Pump. The electric element activates when the ambient air temperature is outside this range and heating of the water is required.

(2) Energy savings of up to 70% are based on Australian Government approved TRNSYS simulation modelling using a medium load in Zone 3 and apply when replacing an electric water heater of similar size with a Solahart Atmos® Eco 180HDC Heat Pump. Any savings will vary depending upon your location, type of water heater being replaced, hot water consumption and fuel tariff. Before installation – seek advice as to suitability to household usage and tariffs. The impact on an electricity account will depend on the tariff arrangement of the water heater being replaced and where you live. The water heater is recommended for connection to an uninterrupted 24 hour continuous tariff power supply. Depending upon the size of the household and its hot water requirements and if the Electricity Retailer permits, an extended off-peak (overnight and day) or Extended time controlled power supply connection of a minimum 16 hours per day may also be suitable. Before purchase consult your energy provider for more information on cost comparisons.

(3) Warranty limits regarding water chemistry. Harsh water regions – the Solahart warranty may not apply if the water heater is connected to a water supply which has a Total Dissolved Solids content >2500mg/L; is scaling with a Saturation Index >+0.8, or; is corrosive with a Saturation Index <-1.0.

(4) Warranty Periods: 7 years supply on cylinder, 3 years labour on cylinder, 3 years supply on sealed system including labour, 1 year supply and labour on all other parts. Applies to a single family domestic dwelling only. Conditions apply. See the Solahart warranty set out in the Owner's Guide and Installation Instructions.

(5) Noise Level – A noise level of 48 dB(A) was measured at 1 m from the water heater during a Noise Test conducted to Standard GB/T 23137-2008 in a hemi-anechoic chamber within a laboratory. The noise level when installed may be higher due to sound reflections from adjacent walls and structures.

(6) An average COP value of 4.9 was measured under test conditions with an ambient air temperature of 19˚C/15˚C (Dry Bulb/Wet Bulb) over the entire heat-up process, heating of the water from 10˚C to 60˚C during water heater operation and a power supply of 240 V~ 50 Hz. Note that the actual COP of the product at any given time will be impacted by a number of factors, including the ambient air and cold-water inlet temperatures at the place of installation and time of day / season of operation.